

ANTREX Electronics

Electronic Components Sourcing Information

Product Reference Information

Part Number:	SF-0603FP160-2
Manufacturer:	Bourns Inc.
Package:	Tape & Reel (TR), Cut Tape (CT), Digi-Reel®
Availability:	Please confirm with sales

Product Page:

<https://antrexco.com/product/details/bourns-inc/sf-0603fp160-2.html>

Request a Quote:

[Submit RFQ for this part](#)



Scan for product page

Contact Information

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Quality & Trust

New & Original Components

Supplier verification and packaging condition review

CoC / RoHS / REACH documents available on request

Secure sourcing support for OEM / EMS projects

Note:

This PDF includes an ANTREX product reference cover page.

The original manufacturer datasheet follows from the next page.



SinglFuse™ SF-0603FP Series Features

- Fast acting precision thin film chip fuse for overcurrent protection
- 1608 (EIA 0603) miniature footprint
- Surface mount packaging for automated assembly
- UL 248-14 compliant
- RoHS compliant* and halogen free**

SF-0603FP Series - Fast Acting Precision Surface Mount Fuses

Clearing Time Characteristics for Series

% of Current Rating	Clearing Time at 25 °C	
	Min.	Max.
100 %	4 hours	—
200 %	—	5 seconds

Additional Information

Click these links for more information:



Electrical Characteristics

Model	Rated Current (A)	Resistance (Ω) Typ.***	Rated Voltage	Interrupting Rating	Typical I ² t (A ² s) ****	Certifications
						cUL: E198545
SF-0603FP050-2	0.50	0.26	50 VDC	50 A @ 50 VDC	0.0088	✓
SF-0603FP063-2	0.63	0.218	32 VAC 32 VDC	50 A @ 32 VAC 50 A @ 32 VDC	0.0125	✓
SF-0603FP080-2	0.80	0.132			0.0206	✓
SF-0603FP100-2	1.00	0.0845			0.0211	✓
SF-0603FP125-2	1.25	0.063			0.0472	✓
SF-0603FP150-2	1.50	0.0505			0.0623	✓
SF-0603FP160-2	1.60	0.046			0.0817	✓
SF-0603FP200-2	2.00	0.032			0.1176	✓
SF-0603FP250-2	2.50	0.0255			0.1807	✓
SF-0603FP300-2	3.00	0.02			0.3177	✓
SF-0603FP315-2	3.15	0.019			0.3615	✓
SF-0603FP400-2	4.00	0.013			0.5348	✓
SF-0603FP500-2	5.00	0.01			0.7726	✓

*** Resistance measured with ≤10 % rated current at 25 °C ambient. Tolerance ± 25 %.

**** Melting I²t calculated at 10 times rated current.

Environmental Characteristics

Operating Temperature.....	-20 °C to +105 °C
Storage Conditions	
Temperature	+5 °C to +35 °C
Humidity.....	40 % to 75 %
Shelf Life.....	2 years from manufacturing date
Moisture Sensitivity Level.....	1
ESD Classification (HBM).....	Class 6

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

**Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

"SinglFuse" is a trademark of Bourns, Inc.

Specifications are subject to change without notice. Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.



**WARNING Cancer
and Reproductive Harm**
www.P65Warnings.ca.gov

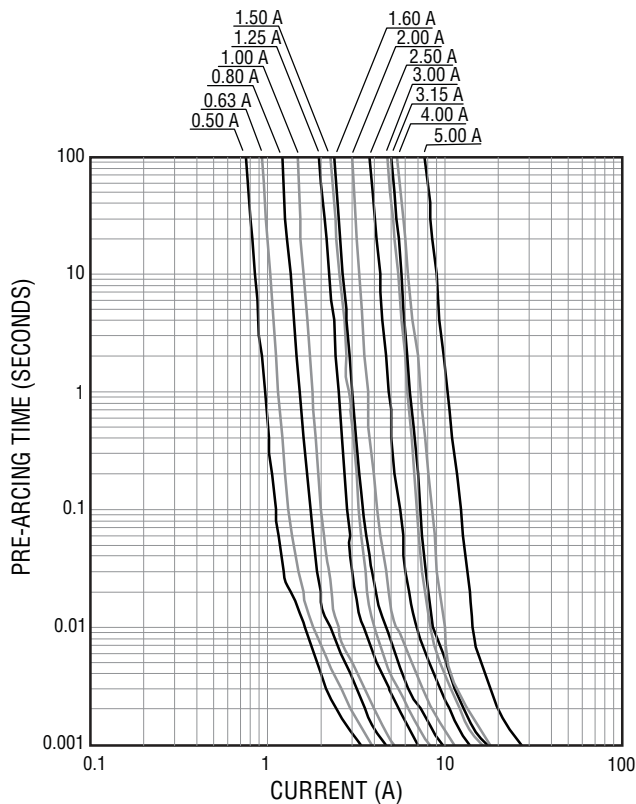
SinglFuse™ SF-0603FP Series Applications

- Portable memory
- LCD monitors
- Disk drives
- PDAs
- Digital cameras
- DVDs
- Cell phones
- Rechargeable battery packs
- Battery chargers
- Set top boxes
- Industrial controllers

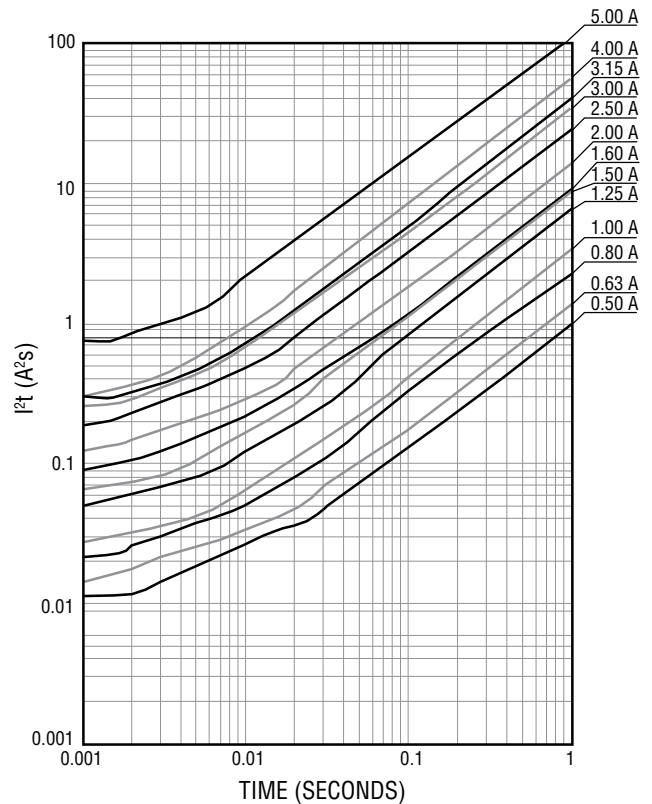
SF-0603FP Series - Fast Acting Precision Surface Mount Fuses

BOURNS®

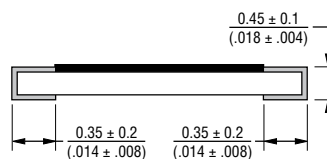
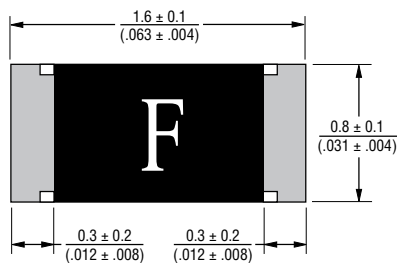
Average Pre-Arcing Time vs. Current Curves



Average I^2t vs. t Curves

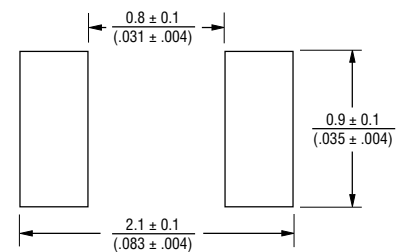


Product Dimensions



DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$

Recommended Pad Layout



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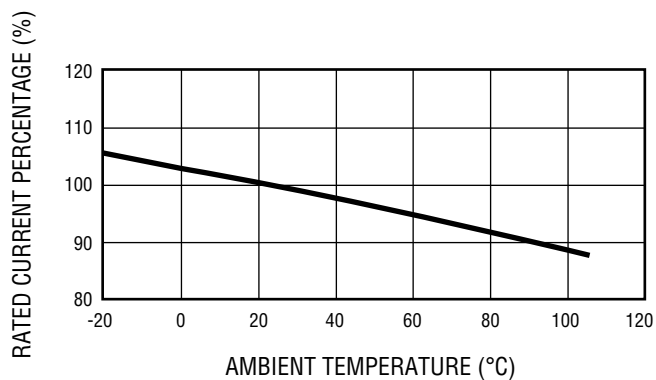
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SF-0603FP Series - Fast Acting Precision Surface Mount Fuses

BOURNS®

Thermal Derating Curve



How to Order

SinglFuse™
 Product Designator _____
 SMD Footprint _____
 1608 (EIA 0603) size
 Fuse Blow Type _____
 FP = Fast acting precision
 Rated Current _____
 050-500 (500 mA - 5.00 A)
 Packaging Type _____
 2 = Tape & Reel (5,000 pcs./reel)

SF - 0603 FP 050 - 2

Packaging

Reel Dimension	7-inch Tape and Reel
Specification	EIA 481-2
Quantity	5,000 pieces
Packaging Code	-2

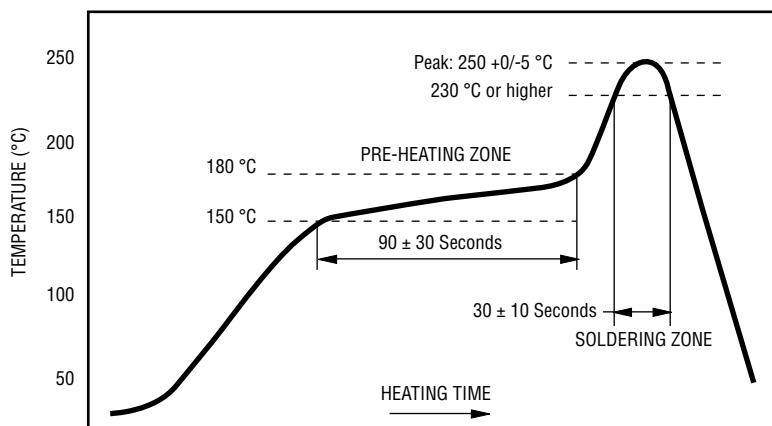
Typical Part Marking

Represents total content. Layout may vary.



RATED CURRENT (A)
 F = 0.50 S = 2.00
 I = 0.63 T = 2.50
 K = 0.80 3 = 3.00
 L = 1.00 U = 3.15
 M = 1.25 W = 4.00
 P = 1.50 Y = 5.00
 N = 1.60

Solder Reflow Recommendations



PEAK: 250 ± 5 °C, 5 seconds
 PRE-HEATING ZONE: 150 to 180 °C, 90 ± 30 seconds
 SOLDERING ZONE: 230 °C or higher, 30 ± 10 seconds

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Reliability Testing

No.	Test	Requirement	Test Condition
1	Carrying Capacity	No fusing	Rated current, 4 hours
2	Fusing Time	Within 1 minute	200 % of its rated current
3	Interrupting Ability	No mechanical damages	After the fuse is interrupted, rated voltage applied for 30 seconds again
4	Bending Test	No mechanical damages	Distance between holding points: 90 mm, Bending: 3 mm, 1 time, 30 seconds
5	Resistance to Solder Heat	±20 %	260 °C ±5 °C, 10 seconds ±1 second
6	Solderability	95 % coverage minimum	235 °C ±5 °C, 2 ±0.5 second 245 °C ±5 °C, 2 ±0.5 second (lead free)
7	Temperature Rise	<75 °C	100 % of its rated current, measure of surface temperature
8	Resistance to Dry Heat	±20 %	105 °C ±5 °C, 1000 hours
9	Resistance to Solvent	No evident damage on protective coating and marking	23 °C ±5 °C of isopropyl alcohol, 90 seconds
10	Residual Resistance	10k ohms or more	Measure DC resistance after fusing
11	Thermal Shock	ΔR < 10 %	-20 °C / +25 °C / +125 °C / +25 °C, 10 cycles

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